



## **WESTERN MICHIGAN UNIVERSITY GEOSCIENCES DEPARTMENT**

### **DEPARTMENT STRENGTHS**

- **GEOSCIENCES PROGRAM BA/BS, MA/MS, PhD**
  - 1965 to present, WMU has graduated over 1600 professionals
- **HYDROGEOLOGY – APPLIED DEGREE PROGRAM – ONE OF THE FEW PROGRAMS STILL OPERATING IN THE US**
  - 400 + Hydrogeology (Groundwater) Graduates, many working for the State of Michigan
- **HYDROGEOLOGY FIELD CAMP (6 Week Course) TO TRAIN HYDROGEOLOGISTS IN THE FIELD TECHNIQUES NECESSARY TO ACQUIRE GROUNDWATER FIELD DATA.**
  - Since 1989, for 25 years this is one of the last University applied programs in the world having an annual course.
- **GEOLOGIC MAPPING AND GROUNDWATER ASSESSMENTS**
  - Since 1978- mapping quadrangles (~56 square miles), Fed funding, no formal State Funding.
- **SHALLOW GEOPHYSICS - NEAR SURFACE SYSTEMS**
  - Since 1984, associated with geologic mapping program and many thesis programs.
- **SLOPE AND BEACH STABILITY PROGRAMS**
  - Since 1970 and subsequent Army Corps of Engineer grants and studies
- **OIL AND GAS RESOURCE STUDIES & ASSESSMENTS**
  - Since 1983, MGRRE Facility, numerous grants and studies.
- **GEOCHEMISTRY OF SURFACE WATERS IN STREAMS, LAKES, WETLANDS, ETC.**
  - Since 1999
- **THESES (MASTERS AND PHD) STUDIES IN ALL GEOSCIENCE DISCIPLINES**

**NOT UNTIL JANUARY 2014, DID ANYONE REQUEST FROM WMU HYDROGEOLOGISTS DETAILED GEOLOGIC INFORMATION PERTAINING TO MICHIGAN'S GROUNDWATER RESOURCES. PRIOR TO THAT TIME, NO ENTITY HAD CALLED WMU TO ASK A QUESTION OR SEEK ANY GUIDANCE ON MICHIGAN'S GROUNDWATER RESOURCES. UNTIL THE TRANSFER OF THE SURVEY TO WMU, THE SURVEY HAD NOT PRODUCED SCIENTIFIC GEOLOGICAL RESEARCH FOR 30 YEARS, A GEOLOGIC DROUGHT.**

**92% OF THE GROUNDWATER RESOURCE IN THE LOWER PENINSULA IS WITHIN THE GLACIAL MATERIAL. NONE OF THE RECENT PUBLICATIONS AND RESEARCH HAS BEEN PREPARED BY SCIENTISTS WITH GLACIAL GEOLOGY AND GROUNDWATER EXPERTISE.**